

# Product quality, service reliability and management of operations at Starbucks

Kioumars Paryani

*Decision Sciences Group, College of Business, University of Detroit Mercy, Detroit, MI 48221-3038, USA  
E-mail: paryanki@udmercy.edu*

---

## Abstract

High product quality, service reliability, and management of operations are key factors in business growth and sustainability. Analyzing “The Starbucks Experience” is a pedagogical approach to reinforcing the concepts of control and management of quality, service reliability, and efficient operations in action. The objective of this paper is to show how providing high-quality, reliable products and service at Starbucks have influenced its market share, productivity, and profitability. In turn, Starbucks has improved on these business measures by excelling in operations management. The approach taken was to research the early days at Starbucks to gain insight on what made Starbucks so successful and then to use observational research to assess the customer experience at a particular Starbucks store in a city in the state of Michigan, USA. Sitting in this Starbucks store in the city’s little downtown and observing its operations and customers contact offered the opportunity to observe customers waiting in line, the baristas serving the customers, examining the store’s layout, and listening to conversations that revealed what customers like and dislike about “The Starbucks Experience.” Recommendations are made to improve operations. These areas fall under operations management for a company that sells a product and provides a service. There are three reasons customers choose Starbucks: the coffee, the people serving the coffee, and the experience in the stores. By excelling in these three areas and improving operations management, Starbucks can regain its market share, and improve productivity and profitability.

*Keywords:* The Starbucks Experience, operations management, layout, observational research, market share, supply chain, supply chain management.

DOI: <http://dx.doi.org/10.4314/ijest.v3i7.1S>

---

## 1. Introduction

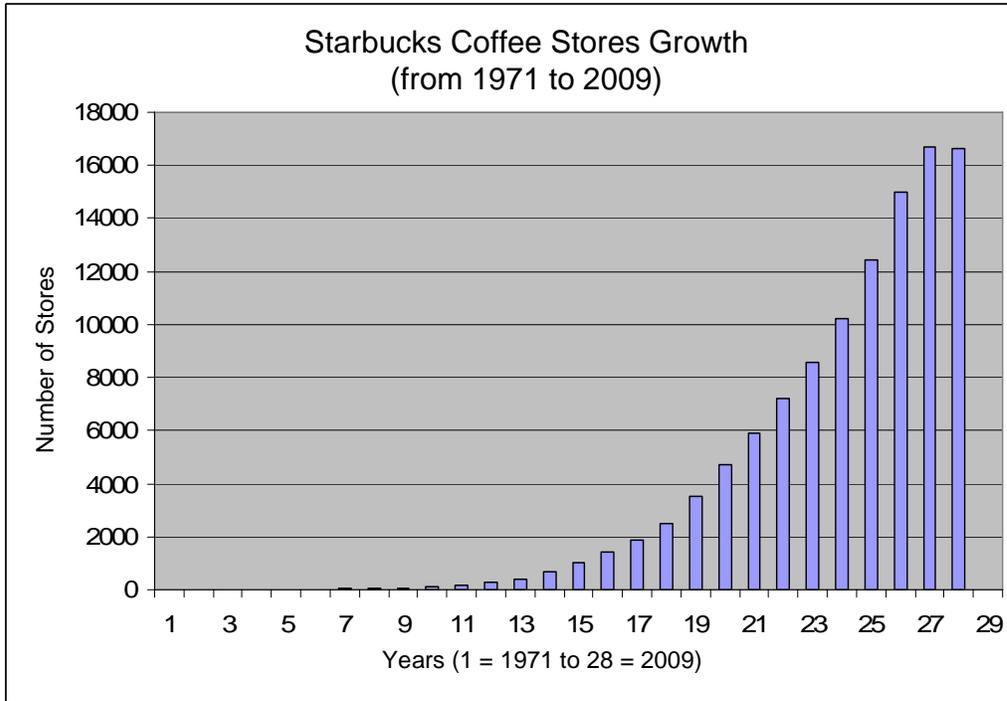
Established in 1971, Starbucks has grown from humble beginnings into the world’s largest chain of coffee houses (Wikipedia I and II); see Figure 1 and Table 1, for a growth progression, measured in terms of stores opened, and chronology of events leading to the growth of Starbucks (Starbucks Company Timeline). The company was founded with the following mission (Starbucks Company Timeline; Mission statement of company; and Wikipedia II):

Establish Starbucks as the premier purveyor of the finest coffee in the world while maintaining our uncompromising principles as we grow. The following six guiding principles will help us measure the appropriateness of our decisions:

1. Provide a great work environment and treat each other with respect and dignity
2. Embrace diversity as an essential component in the way we do business
3. Apply the highest standards of excellence to the purchasing, roasting and fresh delivery of our coffee
4. Develop enthusiastically satisfied customers all of the time
5. Contribute positively to our communities and our environment
6. Recognize that profitability is essential to our future success

Quality management was the competitive dimension used to create “The Starbucks Experience” since its beginning in 1971 at Pike Place Market in Seattle, Washington. The company took great pride in dark roasting the best coffee beans, and selling them to the public. Selling roasted coffee beans eventually turned into serving coffee and espresso drinks. Starbucks introduced espresso to the U.S. at a time when this type of coffee was a niche market. The current CEO, Howard Schultz, who has returned to the day-to-

day operations, was the entrepreneur who convinced investors to join his dream of expanding Starbucks coffee across the U.S. and the rest of the world. Howard Schultz is an American businessman, and entrepreneur best known as the chairman and CEO of Starbucks and a former owner of the Seattle SuperSonics (Starbucks Company Timeline; Wikipedia II). Schultz co-founded Maveron, an investment group, in 1998 with Dan Levittown. In 2006, Forbes Magazine ranked Schultz as the 354<sup>th</sup> richest person in the United States, with a net worth of \$1.1 billion dollars (Franchise business; Wikipedia I).



**Figure 1.** Starbucks Growth Progression  
(Source of Data: Starbucks Company Timeline, [www.starbucks.com](http://www.starbucks.com))

**Table 1:** Chronology of Events Leading to the Growth of Starbuck Coffee

Events	Date	Total Number of stores
Starbucks opens first store in Seattle’s Pike Place Market, Washington.	1971	
Howard Schultz joins Starbucks as director of retail <i>Operations and Marketing</i> . Starbucks begins providing coffee to fine restaurants and Espresso bars.	1982	
Howard Schultz travels to Italy. He’s impressed with the popularity of Espresso bars in Milan and realizes the potential of developing a similar coffeehouse culture in Seattle, Washington.	1983	
Howard Schultz convinces the founders of Starbucks to test the coffeehouse concept in downtown Seattle, where the first Starbucks® Caffè Latte is served. This successful experiment is the genesis for a company that Schultz founds in 1985.	1984	
Howard Schultz founds Il Giornale, offering brewed coffee and espresso beverages made from Starbucks® coffee beans.	1985	
Il Giornale acquires Starbucks assets with the backing of local investors and changes its name to Starbucks Corporation. Opens in Chicago and Vancouver, Canada.	1987	17
Starbucks offers full health benefits to eligible full- and part-time employees.	1988	33
No significant event is recorded.	1989	55
Starbucks expands its headquarters in Seattle, Washington.	1990	84
Starbucks becomes the first privately owned U.S. company to offer a stock option program that includes part-time employees. It opens first licensed airport store at Seattle’s Seattle-Tacoma (Sea-Tac) International Airport, Washington.	1991	116
Starbucks completes its “initial public offering” (IPO), with common stock being traded on the Nasdaq National Market under the trading symbol “SBUX.”	1992	165

Source: Starbucks Company Timeline, [www.starbucks.com](http://www.starbucks.com)

Note: The enormity of events taking place in 2008 and 2009 indicate Starbucks effort to stop and reverse the downing trend in its growth due to the world-wide economic recession.

**Table 1 (cont'd):** Chronology of Events Leading to the Growth of Starbuck Coffee

Events	Date	Total Number of stores
Starbucks opens a roasting plant in Kent, Washington and announces first two-for-one stock split.	1993	272
No significant event is recorded.	1994	425
Starbucks begins serving Frappuccino® blended beverages, introduces Starbucks® super-premium ice cream, it announces second two-for-one stock split and opens roasting facility in York, Pennsylvania.	1995	667
Starbucks begins selling bottled Frappuccino® coffee drink through North American Coffee Partnership (Starbucks and Pepsi-Cola North America) and opens stores in: Japan (first store outside of North America) and Singapore.	1996	1,015
Starbucks establishes “The Starbucks Foundation”, benefiting local literacy programs in communities where Starbucks has coffeehouses and opens stores in the Philippines.	1997	1,412
Starbucks acquires Tazo, a tea company based in Portland, Oregon; it forms “Urban Coffee Opportunities”, a joint venture with Ervin “Magic” Johnson’s “Johnson Development Corp.”, to develop Starbucks stores in diverse, urban and suburban communities. It extends the Starbucks brand into grocery channels across the U.S. through licensing agreement with Kraft Foods, Inc. It also launches Starbucks.com. and opens stores in Malaysia, New Zealand, Taiwan, Thailand and U.K.	1998	1,886
Starbucks partners with Conservation International to promote sustainable coffee-growing practices. Acquires Hear Music, a San Francisco-based music company. Announces third two-for-one stock split. Opens stores in China, Kuwait, Lebanon and South Korea.	1999	2,498
Howard Schultz transitions from chairman and CEO to chairman and chief global strategist. Orin Smith is promoted to president and CEO. Starbucks introduces coffee category that includes shade grown, organic and Fair Trade Certified™ selections. It establishes licensing agreement with TransFair USA to sell Fair Trade Certified™ coffee in U.S. and Canada. Opens stores in: Australia, Bahrain, Hong Kong, Qatar, Saudi Arabia and United Arab Emirates.	2000	3,501
Starbucks introduces ethical coffee-sourcing guidelines developed in partnership with Conservation International. Introduces the Starbucks Card, an innovative stored-value card for customers to use and reload. Announces fourth two-for-one stock split. Opens stores in Austria and Switzerland.	2001	4,709
Starbucks enters into licensing agreements with national Fair Trade organizations to sell Fair Trade Certified™ coffee in the countries where Starbucks does business. Establishes Starbucks Coffee Trading Company (SCTC) in Lausanne, Switzerland. Opens stores in Germany, Greece, Indonesia, Mexico Oman, Puerto Rico and Spain.	2002	5,886
Starbucks acquires Seattle Coffee Company, which includes Seattle’s Best Coffee and Torrefazione Italia coffee brands. Opens new state-of-the-art roasting facilities in Carson Valley, Nevada, and Amsterdam, Netherlands. Opens stores in Chile, Cyprus, Peru and Turkey.	2003	7,225
Starbucks opens first Starbucks Farmer Support Center in San Jose, California and Costa Rica. Releases Ray Charles, Genius Loves Company CD through a collaboration between Concord Records and Starbucks Hear Music. Introduces Starbucks Coffee Master Program. Opens stores in France.	2004	8,569
Orin Smith retires as Starbucks president and CEO. Jim Donald is promoted to president and CEO. Starbucks acquires Ethos Water and sets a goal of donating \$10 million to support clean water projects over the next five years. It announces fifth two-for-one stock split, and opens stores in Bahamas, Ireland and Jordan.	2005	10,241
Starbucks launches the industry’s first paper beverage cup containing post-consumer recycled fiber, saving more than 75,000 trees each year. Opens stores in Brazil and Egypt.	2006	12,440
Starbucks eliminates all artificial trans fat and makes 2 percent milk the new standard for espresso beverages in all U.S. stores as part of commitment to health and wellness. Opens stores in Romania and Russia.	2007	15,011
Chairman Howard Schultz returns as CEO. Starbucks announces a renewed focus on customer experience and innovation; acquires Coffee Equipment Company and its Clover® brewing system; launches MyStarbucksIdea.com, Starbucks’s first online community; announces Starbucks™ Shared Planet™, the company’s long-term commitment to conducting business responsibly; expands partnership with Conservation International for work on ethical sourcing and climate change; launches Pike Place Roast™, a signature coffee that is freshly roasted,	2008	16,680

freshly ground and freshly brewed every day (Pike Place is a trademark of the Pike Place Market PDA, used under license); announces focus for entertainment business on digital strategy and core content with music and books; Turns over day-to-day management of the Hear Music Record Label to Concord Music Group; and opens stores in Argentina, Bulgaria, Czech Republic and Portugal.		
Starbucks launches Starbucks VIA™ Ready Brew Coffee; becomes the world's largest buyer of Fair Trade Certified™ coffee; revamps food offerings (food items are made without artificial flavors, artificial trans fats, artificial dyes and high-fructose corn syrup); opens second Starbucks Farmer Support Center in Kigali, Rwanda. Starbucks helps save lives in Africa through its partnership with (RED)™. Millions of daily purchases of (STARBUCKS)RED products have generated contributions equal to more than 7 million daily doses of antiretroviral medicine. Starbucks is the most engaged brand in social media according to ENGAGEMENT db Report; and launches myStarbucks and Starbucks Card iPhone apps. Opens stores in Poland and Aruba.	2009	16,635

Source: Starbucks Company Timeline, www.starbucks.com

Note: The enormity of events taking place in 2008 and 2009 indicate Starbucks effort to stop and reverse the downing trend in its growth due to the world-wide economic recession.

**Table 1:** Chronology of Events Leading to the Growth of Starbuck Coffee

Events	Date	Total Number of stores
Starbucks opens first store in Seattle's Pike Place Market, Washington.	1971	
Howard Schultz joins Starbucks as director of retail <i>Operations and Marketing</i> . Starbucks begins providing coffee to fine restaurants and Espresso bars.	1982	
Howard Schultz travels to Italy. He's impressed with the popularity of Espresso bars in Milan and realizes the potential of developing a similar coffeehouse culture in Seattle, Washington.	1983	
Howard Schultz convinces the founders of Starbucks to test the coffeehouse concept in downtown Seattle, where the first Starbucks® Caffè Latte is served. This successful experiment is the genesis for a company that Schultz founds in 1985.	1984	
Howard Schultz founds Il Giornale, offering brewed coffee and espresso beverages made from Starbucks® coffee beans.	1985	
Il Giornale acquires Starbucks assets with the backing of local investors and changes its name to Starbucks Corporation. Opens in Chicago and Vancouver, Canada.	1987	17
Starbucks offers full health benefits to eligible full- and part-time employees.	1988	33
No significant event is recorded.	1989	55
Starbucks expands its headquarters in Seattle, Washington.	1990	84
Starbucks becomes the first privately owned U.S. company to offer a stock option program that includes part-time employees. It opens first licensed airport store at Seattle's Seattle-Tacoma (Sea-Tac) International Airport, Washington.	1991	116
Starbucks completes its "initial public offering" (IPO), with common stock being traded on the Nasdaq National Market under the trading symbol "SBUX."	1992	165

Source: Starbucks Company Timeline, www.starbucks.com

Note: The enormity of events taking place in 2008 and 2009 indicate Starbucks effort to stop and reverse the downing trend in its growth due to the world-wide economic recession.

**Table 1 (cont'd):** Chronology of Events Leading to the Growth of Starbucks Coffee

Events	Date	Total Number of stores
Starbucks opens a roasting plant in Kent, Washington and announces first two-for-one stock split.	1993	272
No significant event is recorded.	1994	425
Starbucks begins serving Frappuccino® blended beverages, introduces Starbucks® super-premium ice cream, it announces second two-for-one stock split and opens roasting facility in York, Pennsylvania.	1995	667
Starbucks begins selling bottled Frappuccino® coffee drink through North American Coffee Partnership (Starbucks and Pepsi-Cola North America) and opens stores in: Japan (first store outside of North America) and Singapore.	1996	1,015
Starbucks establishes “The Starbucks Foundation”, benefiting local literacy programs in communities where Starbucks has coffeehouses and opens stores in the Philippines.	1997	1,412
Starbucks acquires Tazo, a tea company based in Portland, Oregon; it forms “Urban Coffee Opportunities”, a joint venture with Ervin “Magic” Johnson’s “Johnson Development Corp.”, to develop Starbucks stores in diverse, urban and suburban communities. It extends the Starbucks brand into grocery channels across the U.S. through licensing agreement with Kraft Foods, Inc. It also launches Starbucks.com. and opens stores in Malaysia, New Zealand, Taiwan, Thailand and U.K.	1998	1,886
Starbucks partners with Conservation International to promote sustainable coffee-growing practices. Acquires Hear Music, a San Francisco-based music company. Announces third two-for-one stock split. Opens stores in China, Kuwait, Lebanon and South Korea.	1999	2,498
Howard Schultz transitions from chairman and CEO to chairman and chief global strategist. Orin Smith is promoted to president and CEO. Starbucks introduces coffee category that includes shade grown, organic and Fair Trade Certified™ selections. It establishes licensing agreement with TransFair USA to sell Fair Trade Certified™ coffee in U.S. and Canada. Opens stores in: Australia, Bahrain, Hong Kong, Qatar, Saudi Arabia and United Arab Emirates.	2000	3,501
Starbucks introduces ethical coffee-sourcing guidelines developed in partnership with Conservation International. Introduces the Starbucks Card, an innovative stored-value card for customers to use and reload. Announces fourth two-for-one stock split. Opens stores in Austria and Switzerland.	2001	4,709
Starbucks enters into licensing agreements with national Fair Trade organizations to sell Fair Trade Certified™ coffee in the countries where Starbucks does business. Establishes Starbucks Coffee Trading Company (SCTC) in Lausanne, Switzerland. Opens stores in Germany, Greece, Indonesia, Mexico Oman, Puerto Rico and Spain.	2002	5,886
Starbucks acquires Seattle Coffee Company, which includes Seattle’s Best Coffee and Torrefazione Italia coffee brands. Opens new state-of-the-art roasting facilities in Carson Valley, Nevada, and Amsterdam, Netherlands. Opens stores in Chile, Cyprus, Peru and Turkey.	2003	7,225
Starbucks opens first Starbucks Farmer Support Center in San Jose, California and Costa Rica. Releases Ray Charles, Genius Loves Company CD through a collaboration between Concord Records and Starbucks Hear Music. Introduces Starbucks Coffee Master Program. Opens stores in France.	2004	8,569
Orin Smith retires as Starbucks president and CEO. Jim Donald is promoted to president and CEO. Starbucks acquires Ethos Water and sets a goal of donating \$10 million to support clean water projects over the next five years. It announces fifth two-for-one stock split, and opens stores in Bahamas, Ireland and Jordan.	2005	10,241
Starbucks launches the industry’s first paper beverage cup containing post-consumer recycled fiber, saving more than 75,000 trees each year. Opens stores in Brazil and Egypt.	2006	12,440
Starbucks eliminates all artificial trans fat and makes 2 percent milk the new standard for espresso beverages in all U.S. stores as part of commitment to health and wellness. Opens stores in Romania and Russia.	2007	15,011

**Table 1 (cont'd):** Chronology of Events Leading to the Growth of Starbucks Coffee

Events	Date	Total Number of stores
Chairman Howard Schultz returns as CEO. Starbucks announces a renewed focus on customer experience and innovation; acquires Coffee Equipment Company and its Clover® brewing system; launches MyStarbucksIdea.com, Starbucks's first online community; announces Starbucks™ Shared Planet™, the company's long-term commitment to conducting business responsibly; expands partnership with Conservation International for work on ethical sourcing and climate change; launches Pike Place Roast™, a signature coffee that is freshly roasted, freshly ground and freshly brewed every day (Pike Place is a trademark of the Pike Place Market PDA, used under license); announces focus for entertainment business on digital strategy and core content with music and books; Turns over day-to-day management of the Hear Music Record Label to Concord Music Group; and opens stores in Argentina, Bulgaria, Czech Republic and Portugal.	2008	16,680
Starbucks launches Starbucks VIA™ Ready Brew Coffee; becomes the world's largest buyer of Fair Trade Certified™ coffee; revamps food offerings (food items are made without artificial flavors, artificial trans fats, artificial dyes and high-fructose corn syrup); opens second Starbucks Farmer Support Center in Kigali, Rwanda. Starbucks helps save lives in Africa through its partnership with (RED)™. Millions of daily purchases of (STARBUCKS)RED products have generated contributions equal to more than 7 million daily doses of antiretroviral medicine. Starbucks is the most engaged brand in social media according to ENGAGEMENT db Report; and launches myStarbucks and Starbucks Card iPhone apps. Opens stores in Poland and Aruba.	2009	16,635

Source: Starbucks Company Timeline, [www.starbucks.com](http://www.starbucks.com)

Note: The enormity of events taking place in 2008 and 2009 indicate Starbucks effort to stop and reverse the downing trend in its growth due to the world-wide economic recession.

The company's name is in part after Starbuck, Captain Ahab's first mate in the novel *Moby-Dick*, as well as a turn-of-the-century mining camp (Starbo or Storbo) on Mount Rainier. According to Howard Schultz's book *Pour Your Heart into It: How Starbucks Built a Company One Cup at a Time*, the name of the company was derived from *Moby-Dick*, although not in as direct a fashion as many assume. Gordon Bowker liked the name "Pequod" (the ship in the novel), but his then creative partner Terry Heckler responded, "No one's going to drink a cup of Pee-quod!" Heckler suggested "Starbo". Brainstorming with these two ideas resulted in the company being named for the Pequod's first mate, Starbuck (Schultz and Jones, 1997).

The company grew from 17 stores in 1987 to more than 16,000 worldwide today (O'Neill, 2008); see Table 1. The stores are all company owned except for the licensing arrangements for kiosks in places such as airports and hospitals. Starbucks does not franchise operations as a precaution to not lose control and put its quality at risk (Wikipedia II). Recently, Starbucks was in the news for shutting down 500 of its stores and laying off 7% of its work force (Adamy, 2008). The reason for the store closings were that earnings were down and the stock price has tumbled since late 2006; see Table 1 for intense activities that Starbucks took to reverse this downturn trend. Other than the economic recession in the U.S. and around the world, the downslide in Starbucks earnings is also attributed to a slowdown in consumer spending and an increase in competition from other coffee and restaurant chains, especially McDonald's (Adamy, 2008). Today, Starbucks is working to regain market share, and improve productivity and profitability without sacrificing the quality and reliability of its products and service.

## 2. Starbucks Experience

Starbucks's strategy in targeting its customers is to position itself as a "third" place in the lifestyles of its customers. That is to say, the prototypical Starbucks customer will spend their time at home, at work, and at Starbucks. To encourage this idea, Starbucks locations are furnished with comfortable seating, provide outlets for electronic equipment, and a blanket no-smoking policy ensures that all customers are comfortable in the environment, refer to Figure 2.

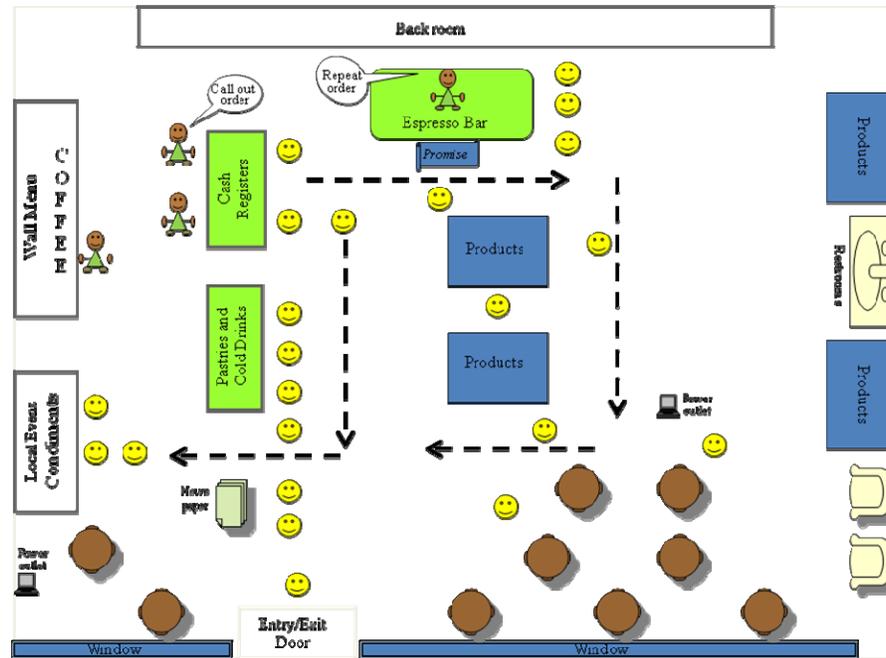


Figure 2. Starbucks Coffee Store Layout in a City in Michigan

Making customers more comfortable while spending time in the stores causes them to stay longer and, in doing so, indulge in more of what Starbucks has to offer. As customers linger, they are more likely to buy a second cup of coffee or a snack, to pay for wi-fi internet access, to burn a CD, etc. In addition to diversify its product offerings, Starbucks is also looking to broaden its customer base beyond just young urban professionals and college students. Many of the more recent adjustments to how Starbucks conducts its business are aimed at accommodating the varied lifestyles of the not-so-traditional Starbucks customer. These include: (1) increased number of drive-thru locations – in locations with limited parking opportunities, a drive-thru opens up the potential market to include driving commuters; (2) increased presence in non-urban locations – the move to expand into these locations exposes Starbucks to “middle-America” and could eventually almost double the domestic market for their product; (3) increased penetration of licensed products; (4) Starbucks at home – with genuine Starbucks brand coffees now available at the local grocery store, even the cost-conscious consumer who does not want to necessarily spend \$2 per day on coffee can become a Starbucks customer; and (5) Starbucks for business – contracting to supply businesses with products for their cafeteria services, Starbucks opened up yet another arena of possibilities.

The three main reasons for why customers choose Starbucks are: the coffee itself, the Starbucks people who serve the coffee and the experience gained in the stores. The coffee product is dark roasted coffee made from high-quality gourmet coffee beans grown in developing countries.

Once the coffee is roasted, packaged, and shipped to the Starbucks’s retail stores, it’s the baristas who bring the product to life. The baristas are trained employees, referred to as “partners”, who make a coffee drink and understand and explain the diverse coffee varieties. To reduce baristas turnover, Starbucks offers a wage higher than the industry average, health care benefits, and company stock to its partners.

As stated above, Starbucks has become a “third” place for its loyal customers. The “Starbucks Experience” begins when a customer walks into a store that has been designed with the ambiance and spirit of an Italian espresso bar. In an attempt to improve productivity two changes were made in the coffee-making process: the old style espresso machines were replaced with more efficient ones and the baristas stopped grinding coffee before brewing. In an attempt to gain back market share, Howard Schultz, CEO, is bringing back the old style espresso machines so the customers can see their drinks while being made. As the baristas have already started grinding coffee, there is the pleasant aroma of fresh coffee in the stores as customers walk in.

### 3. The Coffee

*3.1 Managing Operations Early On at Starbucks:* Today, Starbucks is a publicly traded company, more than a retail store; it’s an importer, a manufacturer, a wholesaler, and a direct mail business organization. However, in the beginning, before going public in 1992, the roasting plant and headquarters were located next to each other in the city of Seattle, Washington. This close proximity allowed Howard Schultz, to be involved in the operational planning and control of this enterprise on a day-to-day basis (Schultz and Jones, 1997). The retail stores were located in the Seattle area. The company was making money, so measuring effectiveness and efficiency was not a major concern; however, the dream, or strategic plan, has always been to expand and educate new customers on the dark roast coffee product it so proudly sold.

**3.2 Early Supply Chain:** A supply chain (SC) is the network of activities that deliver a product or service to the customer. It is the sourcing of raw materials, assembly, warehousing, order entry, distribution, and delivery. In other words, a supply chain is the sequence of organizational facilities, functions, and activities that are all involved in the production and delivery of a quality product or service at an affordable and competitive price (Gates Gill, 2007; Wisner *et al*, 2005). By facilities we mean warehouses, factories or plants, processing centers, distribution centers, retail outlets, and offices. By functions and activities we mean demand forecasting, purchasing, inventory management, information management, quality assurance, scheduling, production, delivery, and customer service (Russell and Taylor, 2011). It is no wonder that supply chains are also referred to as value chains, because the ultimate value of a product or service takes place along this chain from raw material purchasing to receiving to storage to operations and finally through the distribution system to the end user (Stevenson, 2009).

Supply chain management (SCM) is the business function that coordinates all of the network links, thereby, coordinates efficient movement of goods through the supply chain from suppliers to manufacturers to distributors, and promotes sharing of information such as the demand forecasts, sales data, and sales promotions along the chain (Stevenson, 2009). The main reasons for supply chain management are twofold: (1) a total systems approach to managing the entire flow of information, materials, and services from raw-material suppliers through factories and warehouses to the end customer; and (2) the strategic coordination of business functions within a business organization and throughout its supply chain for the purpose of integrating supply and demand management and creating a balance between supply and demand (Wisner *et al*, 2005). Effective supply chain management is a key component of competing successfully in today's cutthroat global marketplace. Without effectively managing the flow of goods, supplies, and even services, no company can hope to maintain control of their quality, costs, or meet their customer's needs.

Early on the highest quality, Arabica, coffee beans were purchased from farms in developing countries. To add value for the customers, the coffee beans then went through a physical transformation process where they were dark roasted, packaged, and delivered to the retail stores or purchased through direct mail. At the retail stores, the baristas brewed the coffee and served it to the customers.

Starbucks learned early on that the quality of the coffee that ends up in the customers' hands can be easily ruined by mishandling activities in the supply chain. To control process quality, Starbucks had to manage its own supply chain. Simply put, if the farmer does not get a good price for the green coffee beans, they then would not invest in fertilizer and the maintenance involved in growing quality coffee beans (Schultz and Jones, 1997; Wikipedia II). The coffee can be under or over roasted. If the coffee beans sit on the shelf for too long they go stale, so the right amount of inventory is a crucial factor, which in turn relates to the effectiveness of supply chain management. The water used to make the coffee will affect the taste. If the coffee is brewed improperly the taste is affected. If the coffee sits in a pot more than 20 minutes it is no longer considered fresh. Serving quality coffee in ceramic cups enhances the flavor, but makes it impractical for carry outs. Because of these circumstances, Starbucks prefers to handle its own supply chain, open company-owned stores, and has resisted franchising in fear of giving up its control over selling a high-quality product.

Because coffee was the core service at Starbucks, the job of purchasing was not outsourced. The experience came with the original owners of Starbucks when only coffee beans were sold. The entrepreneurs buying the coffee were considered connoisseurs of quality coffee and had many years of "coffee" experience. As a result of this experience, customers were educated about coffee, and it became a value-added service at Starbucks. The more the customer knows about how coffee is grown and prepared, the more loyal they become, and the more willing they are to pay for a high quality cup of coffee.

**3.3 Why Dark Roast:** The highest quality coffee beans have always been dark roasted which is what differentiates Starbucks from other coffee sellers. By roasting the coffee beans dark, Starbucks gave up a way to improve the productivity of the roasting process; the lighter the roast the more money is saved (Schultz and Jones, 1997). Starbucks has always struggled with maintaining its value of serving high-quality dark roast coffee even though there are many non-customers who think the dark roast tastes like burnt coffee.

**3.4 Instability in the Supply Chain:** Purchasing green coffee beans from developing countries brings several risks such as bad weather, political risk, and inconsistent quality. There were times when the weather affected the price of green coffee beans. Starbucks managed supply chain costs by locking in the price of green coffee through long-term contracts at a fixed price which ensured a constant flow of inventory. In June of 1994, the cost of green coffee had been locked in at 0.50 cents a pound. Then a severe frost in Brazil caused the price of green coffee beans to increase 330%. A decision was made to pass the incremental cost on to the customers rather than replacement cost as the gasoline stations are doing today each time the price of oil goes up. Immediately, profitability was affected by an adverse effect in the supply chain. An unstable supply chain can cause an immediate reaction from Wall Street when profits for a company are expected to be affected by adverse conditions (Carier, 2007).

#### **4. Customer Service**

Each Starbucks store has customer comment cards available at the condiment stations. The comment cards help Starbucks management keep in touch with what customers want from the coffee products and "The Starbucks Experience." The cards give the customer a chance to judge the experience they just had and make suggestions on new products. Starbucks has a guarantee statement posted in the store as "Our Promise" that states the customers can get a coffee drink the way they want it. If the customer

is not satisfied with a drink another one will be made to their satisfaction. If a customer wants to try the taste of the coffee before purchasing, the barista will offer a sample. The Starbucks guarantee statement is as follows.

Our Promise: Your drink should be perfect, every time. If not, let us know and we will make it right.

*4.1 Customer Requirements:* Starbucks continuously solicits feedback from customers via a wide variety of means. These include but are not limited to: direct feedback “at the counter;” customer feedback through the Starbucks Customer Connections (SCC) website; and questionnaires on the Corporate Social Responsibility (CSR) report (Starbucks Company Timeline).

By looking at the volume of responses for each category, the company can determine the relative importance placed on a particular issue as well as Starbucks’ overall performance in that area. Tracking of Starbucks’ progress in these areas can be done by tracking the company’s month-to-month performance on individual issues as well as on the aggregate score of the customer responses. The company’s bottom line will also reflect the level of customer satisfaction with Starbucks’ quality products, reliable service, and community activities.

Customer requirements are considered when designing the quality and reliability of the coffee drinks and the experience at Starbucks. As the stores became popular as a “third” place for the customers, Starbucks responded by finding ways to respond to the requirements of the customers and enhance the spirit of the stores.

See Table 2, Starbucks’s Quality Table, for an organized list of customer requirements, appearing in the rows of the table, gathered from research and talking to people who drink coffee. The corresponding solutions, appearing in the columns of the table, describe how Starbucks is responding to meeting the customer requirements. It is suffice to say that Starbucks has attempted to meet all the requirements of the customers. The Quality Table also demonstrates the relationship between the customer requirements and the Starbucks’s solutions. The strength of relationships is determined using the conventional symbolism of the quality function deployment (QFD) process. What follows next are some highlights on how some of the requirements were met.

The “Fresh coffee” requirement, has always been a high priority at Starbucks. The coffee drink products are considered to have independent demand because they are perishable and will not be prepared until a customer places an order. Fresh coffee starts when the coffee beans are roasted, bagged, and shipped to the retail stores. Bags of coffee beans that sit idle in inventory more than the allotted time are donated. Starbucks developed a method of vacuum packaging in flavor-lock bags with a one-way valve that allows carbon dioxide to escape; however, it keeps out the harmful air and moisture which cause the coffee beans to go stale. The flavor-lock bags keep coffee beans fresh for several months (Wikipedia II). Coffee is freshly brewed every hour, even though coffee is good for up to five hours when brewed (Michelli, 2007).

The “Hot coffee” requirement, on the one hand, is a customer requirement for freshness, but also the customers do not want to burn their fingers as they hold the cup. Starbucks originally tried to satisfy these conflicting requirements by the use of double-cupping. However, another conflicting requirement was surfaced which was to meet environmental goals and still provide the sense of freshness and comfort to the customers. Consequently, Starbucks developed corrugated cup holders that act as sleeves on the cup, hence meeting all these conflicting requirements (Michelli, 2007).

The “No bitter coffee” requirement has been addressed recently when Starbucks introduced its Pike Place light roast coffee. There is now a controversy over the new product; it irritates the coffee connoisseurs, but has improved company’s sales (Adamy, 2008 I and II). The “Making drinks with low-fat milk” requirement was a difficult decision to make because low-fat milk tends to make an espresso drink taste watery. Time was spent testing and trying various combinations of low-fat (2%) milk, regular milk, and espresso coffee to create the perfect combination that would maintain a high-quality drink (Schultz and Jones, 1997). The “Organic milk” requirement was met by purchasing milk from cows that are not given growth hormones rather than purchasing certified organic milk which is more expensive. The “Flavored coffee” requirement is achieved by adding syrup to a coffee drink. There are no chemicals added to the beans during roasting to give them a flavor. The “Cold coffee” requirement was achieved for the first time in 1994 when the cold Frappuccino was created in a California store. Frappuccino is a registered trademark of Starbucks and is the name of a blended ice beverage which is sold in every Starbucks store. It is also sold in the form of a bottled coffee beverage in stores across the US. To meet or exceed each new customer requirement Starbucks must research and evaluate the effect it will have on product quality and service reliability then decide if there is a trade-off in losing market share or affecting productivity and profitability.

**Table 2.** Starbucks’s “Quality Table”

Customer Requirements	Importance to customer	Starbucks Solutions																	
		Develop flavor-lock bag	Filter the water in each store	Dark roast high-quality beans	Develop corrugated paper cup holder	Comfortable couch like chairs and tables with chairs	Brew fresh, hot coffee every hour	Introduce Pike Place light roast	Two baristas - one take orders & payment , another make drinks	Employee training	Compile Starbucks's own music CDs to play in stores	Change to a more efficient espresso machine	Add syrups to coffee drinks	Use milk from cows that are not given growth hormones (5)	Use 2% milk.	Combine milk, low-fat, milk and espresso coffee	Create the cold Frappuccino drink	Develop coffee concentrate	Publish calorie count for drinks on Web site
Fresh coffee	9	⊙				⊙													
Gourmet dark roast coffee	10			⊙															
Hot coffee	9				⊙	○													
No bitter coffee	7		△				⊙												
Decaffeinated coffee	7			⊙															
Flavored coffee	7											⊙							
Cold coffee drinks	8															⊙	○		
Low-fat milk	8													⊙	○				△
Organic milk	4												⊙						
Ability to carry the coffee outside the store	10				⊙														
Quick service	10							⊙	○		⊙								
Friendly service	10							○	⊙										
Place to sit down to enjoy a cup of coffee	6				⊙														
Music playing in the store	6									⊙									

Frappuccino is a registered trademark of Starbucks and is the name of a blended ice beverage which is sold in every Starbucks store. It is also sold in the form of a bottled coffee beverage in stores across the US.  
 Strength of relationships: Strong ⊙, Medium ○, Weak △

4.2 Training Improves Customer Service Reliability: “The coffee drinks are inert (Schultz and Jones, 1997).” It’s the people that work at Starbucks that pass on the passion and knowledge about coffee. Because baristas are expected to be more than transaction handlers, the skill involved is higher than is required from a server at McDonald’s, for example. Starbucks has traditionally invested more on training than on advertising. Employees, “partners” as they are called, all go through 24 hours of training on making a quality cup of coffee and learn about the all coffee varieties that are served at Starbucks. At Starbucks, the customer is in control of the process, thus, the baristas are trained to prepare a drink the way the customer wants it. This can make the order process take longer time, but improves the sales opportunity. One thing a barista will not do, for sanitation reasons, is make a drink with milk that customers may bring in to the store with them (Schultz and Jones, 1997).

In addition to training, there are other ways that Starbucks guarantees a reliable coffee drink. A poka-yoke (error-proofing) technique is used to help relay an espresso drink order to the barista behind the espresso bar (i.e., “callout order,” “repeat order”), see Figure 2.

A typical service blueprint of the order process at Starbucks is shown in Figure 3. To start the order process, the barista behind the cash register gives friendly service by looking the customer in the eye and then greeting the customer. The customer gives the order. If the order is for an espresso drink, the barista repeats the order, out loud, and states the ingredients in a predefined order (size, type of milk, type of coffee, etc.) (Gates Gill, 2007). The barista behind the espresso bar repeats the drink ingredients in the same order. This simple poka-yoke technique helps to guarantee that the drink will be made correctly the first time (Gates Gill, 2007). This process was observed at the Michigan store with one addition, the barista asked for the customer’s name and repeated it with the drink order. In the early days, the baristas were trained to ask the customer’s name. Howard Schultz has brought this step back as another way to differentiate Starbucks from the other coffee shops; this act, in turn, has had a positive impact on improving market share.

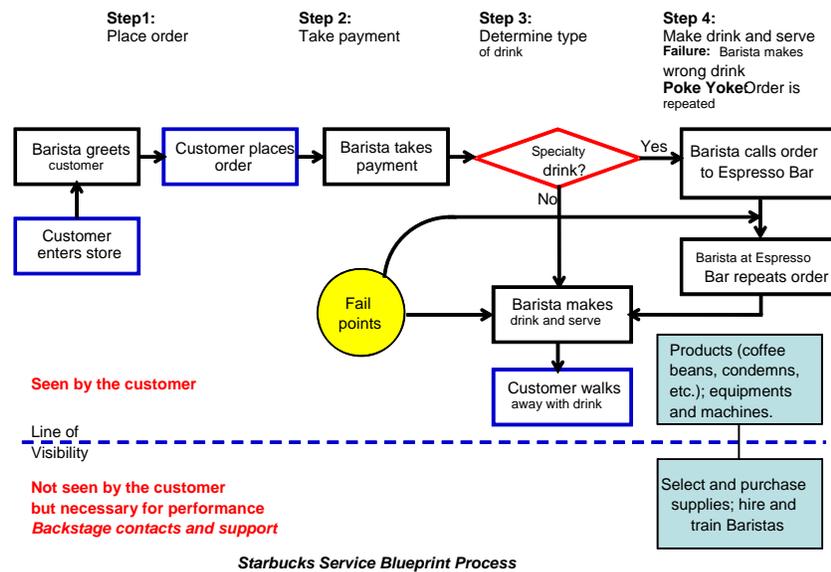


Figure 3. Starbucks Order Process

4.3 Benefits Reduce Partner Turnover: Starbucks employee turn-over rate is 120% less than the industry average for retail coffee shops (Michelli, 2007). There are three reasons for this low-turnover rate: (1) hourly wages are higher than the industry average, (2) partners are offered health care benefits, and (3) a company stock plan is given if they work more than 20 hours per week. Starbucks employees tend to be young and healthy which keeps the cost of health benefits low. The benefits package at Starbucks is a key competitive advantage.

The wage, health benefits, and company stock plan have all helped to reduce Starbucks’s employee turnover; in turn, low-partner turnover has reduced training costs. In 1997, research showed that the average customer returned 18 times per month (Schultz and Jones, 1997). Customers develop a relationship with the baristas serving coffee. One may reasonably assume that low-turnover contributes to a reliable “Starbucks Experience” and customer loyalty.

## 5. The Starbucks Experience

*5.1 Stores Location Selection Decision:* Location decisions are not easy and many factors affect them. Location decisions are closely tied to an organization's strategies, low-cost, convenience to attract market share, effect on capacity and flexibility, represent a long-term commitment of resources, effect investment requirements, operating costs, revenues, and operations, impact competitive advantage, and importance to supply chains. Definitely a multivariate constrained optimization problem. Location decisions arise for a variety of reasons such as addition of new facilities, as part of a marketing strategy to expand markets, growth in demand that cannot be satisfied by expanding existing facilities, depletion of basic inputs which requires relocation, shift in markets, and cost of doing business at a particular location which makes relocation attractive (Stevenson, 2009; Wisner *et al.*, 2005). Starbucks uses its own real-estate strategy for locating company-owned stores. When entering a new market, analysis is made to determine if multiple stores will survive in order to take advantage of economies of scale. A major customer complaint is the long lines waiting for coffee drinks at Starbucks stores. Starbucks opens new locations close to busy locations in order to relieve the wait in lines and increase service rates. The downside to this strategy is the new location tends to cannibalize sales from the busy store. When same-store sales growth for the busy store is reported to weaken, Wall Street reacts with a decline in the stock price. To establish a new store, as with Wal-Mart, Starbucks also experiences resistance from rural communities who feel a Starbucks store will put the local coffee shops out of business and change the character of the rural community. There have been times that Starbucks declined to move into a new community because of this local resistance sentiment (Schultz and Jones, 1997). Starbucks management is sometimes able to reverse this sentiment by becoming involved in the community with donations and charitable events or contributions. There are many jokes about Starbucks becoming ubiquitous. Their retail stores seem to be everywhere. Actress, Janeane Garofalo, once joked on an HBO special, "They just opened a Starbucks – in my living room (Schultz and Jones, 1997)." The tremendous growth of Starbucks, as a mass-market coffee retailer, can certainly give its ubiquity impression; see Figure 1 in the Appendix. Traditionally, when a new store would open the customers would come by word-of-mouth without spending large amounts of money on advertising.

*5.2 Store Layout Evaluation:* Layout is about the configuration of departments, work centers, and equipment, with particular emphasis on movement of work, customers or materials, through the system (Jacobs and Chase, 2011; Russell and Taylor, 2011). Facilities layout decisions arise when designing new facilities and/or re-designing existing facilities. Basic layout types are product layouts, process layouts, fixed-position layout, and combination layouts which contain hybrid layouts and cellular layouts ((Jacobs and Chase, 2011; Stevenson, 2009). From the beginning the idea behind the Starbucks's stores layouts was to recreate the experience in the espresso bars in Italy where customers come in daily and stand to enjoy an espresso drink (Schultz and Jones, 1997). Starbucks, however, found that in the U.S., customers want take-out service and a place to sit in the store while having a drink. Over time, Starbucks has become a "third" place for customers to go to get away from daily hectic, enjoy a cup of coffee, listen to music, do some work using the Internet service, socialize with friends, and even hold a business meeting. Young customers drink lots of coffee and enjoy having a place to go where alcohol is not served. Before moving into a new location, research is done to understand the culture, and art work is displayed in the stores that reflect the community's culture. Seating layout is a mixture of comfortable couch type chairs, with groupings of tables and chairs. See Figure 3 in the Appendix for the store layout for the Starbucks store in Michigan.

The store layout shows that Starbucks mainly uses the product layout approach where customers stand in line, going from station to station so to speak, to be served while interacting with the baristas to place an order, see Figure 3 in the Appendix. No credit cards or checks are taken which helps keep the lines moving. During busy times, at this store, one or two baristas take the order and payment while one makes the basic coffee and tea drinks and another fills orders at the espresso bar. Everything happens in view and in control of the customer. The customer watches the barista grind fresh coffee beans before brewing which is a change that Starbucks has recently made to re-introduce the spirit of the Italian espresso shops. This spirit or "Starbucks Experience" is more important than the mere productivity improvement of, for example, the quick opening of a package of pre-ground coffee. The customer watches a drink order being made while, concurrently, having a conversation with the barista. This high-degree of customer contact is enhanced in two ways: when a barista walks around the store offering samples of products or when a master barista is holding a coffee seminar or demonstration. The espresso bar is separated from the area where the drink order is taken, so the customer must walk to the bar to pick up the specialty drink, see Figure 3 in the Appendix. The espresso machine located here is too high which would not allow the customer to watch as the barista prepares a drink. Had the machine been placed at a lower level, the customers would have been able to see that the barista is well-trained to prepare an espresso between 18 to 23 seconds. One of the changes that Starbucks plans to make is to replace the espresso machines with the old style machines that sit lower. The downside to this decision is that the old style machines are not as efficient; however, the customers will be able to see the barista as the drink is being made which adds to the ambiance of the Starbucks stores and provides the spirit of the Italian espresso shops.

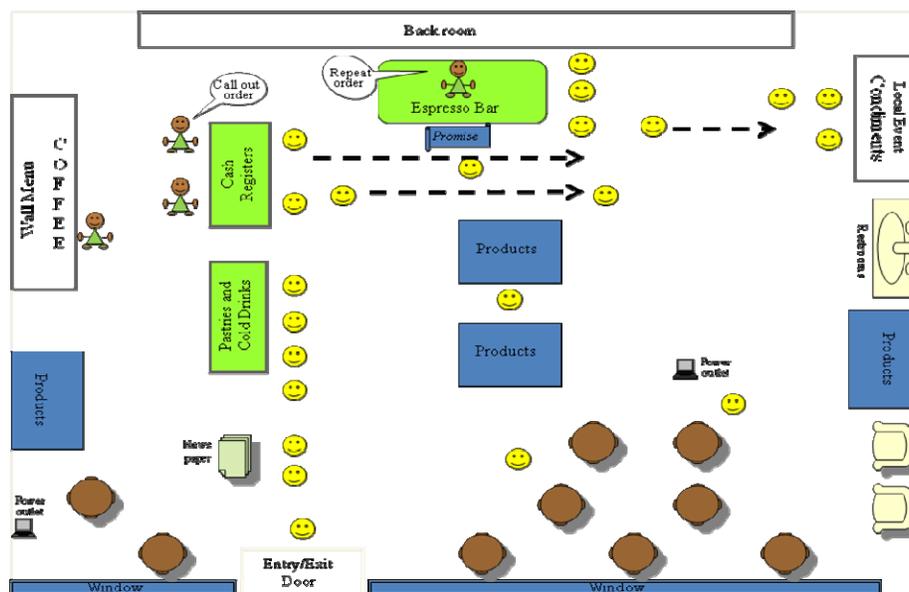
The seating capacity is not adequate during busy times, and there are only two power outlets for plugging in laptops. The power outlets that are available are loose from constant use. Many of the customers, standing or sitting, are asking the baristas how management plans to bring Starbucks back to profitability. The condiments station is checked every 10 minutes for cleanliness and

refills (Michelli, 2007). However, the condiments station can be very messy during busy times when the baristas do not get a chance to check the front of the store. In this layout the condiments station is not properly located for busy times. If the arrival customers queue is long, the customers in need of the condiments must interrupt that line to get to the condiments station. The alternative layout recommended is shown in Figure 4, in the Appendix, in which by simply replacing the condiments station with a product station and widening the pathway between the espresso station and the product stations located in the middle of the store, the movement of customers is enhanced and the queue for orders is not interrupted. The last shift restocks the condiments for the morning because the morning shift has its own procedures to complete. Pastries are delivered daily and must be placed on the shelves before the store opens. Any pastries with defects are returned for a refund. The pastry station and the newspapers stand are strategically placed so the customer sees the display while waiting in line. Many times a pastry purchase is a last minute decision. Cleanliness is a priority consideration at Starbucks, which is another way it differentiates its stores from the competition. Bathrooms are cleaned often and accommodate anyone who wants to use them, even if they are not a customer. This happens frequently in bigger cities because there are very few public restrooms available. Thanks to Starbucks since no one is turned away to get relieved from this vital human need.

## 6. Recommendation

The following are recommendations to further improve operations at Starbucks retail stores:

- Widen appeal to many customer profiles. Early research showed that the profile of a Starbucks customer was a connoisseur, highly-educated, relatively affluent, well-traveled, technologically savvy, cultured, and interested in the arts. As a result of Starbucks's global, mass-marketing strategy, other profiles need to be considered and catered to.
- Improve housekeeping during busy times.
- Offer more types of roasted coffee after noon.
- Develop other light roast coffees that will bring in customers that normally avoid Starbucks because of the "bitter taste" of the coffee.
- Offer more types of healthy pastries or light sandwiches.
- Change the layout of the floor so that long lines do not interfere with customers approaching the condiments stations, see Figure 4 for an alternative layout recommended. Adopt a hybrid layout in which the advantages of both the product layout and process layout will be obtained.



**Figure 4.** Starbucks Coffee Store Recommended Layout for a City in Michigan

By excelling in these areas and improving operations management, Starbucks can regain market share, and improve productivity and profitability. A future study of operations management at Starbucks can include its direct mail business and partnerships. Partnerships have not always been successful in the past due to Starbucks requirement of high-quality and reliability throughout the supply chain.

## 7. Conclusion

A study of the early Starbucks shows that product quality and service reliability were a higher priority than cutting costs. Starbucks paid a premium price for high-quality gourmet coffee beans and they managed the supply chain from beginning to end so that quality and reliability would not be compromised. In the early days, Starbucks did not have to focus on improving market share, productivity, and profitability. When a new store opened customers came by word-of-mouth. Starbucks excelled at three things: the coffee, its people, and the “Starbucks Experience.” Starbucks used to be considered “recession proof” (Kirby, 2008). Achieving an international presence, Starbucks is now suffering growing pains in the U.S. The economy is down causing customers to spend less on extras, and there is competition from other coffee stores such as McDonald’s offering of gourmet coffee drinks for less money (Adamy III, 2008). Today there is a need to improve market share, productivity, and profitability. Howard Schultz, CEO, has recently introduced three operational changes: its new product, Pike Street light roast coffee; the baristas grind fresh coffee beans before brewing to add the aroma of coffee to the store, and the espresso machines will be replaced with the old style machine that is low and allows the customer to see the coffee drink prepared. Finally, Starbucks can continue to find ways to improve its operations management processes and still maintain the quality and reliability of its products and services.

## References

- Adamy, J. I. , 2008. Schultz's Second Act Jolts Starbucks, *The Wall Street Journal Online*, Page A1, Retrieved on May 27, 2008 from <http://online.wsj.com/article/SB121115607637802259.html>
- Adamy, J. II., 2008. New Starbucks Brew Attracts Customers, Flak, *The Wall Street Journal Online*, Page B1, Retrieved on July 3, 2008 from <http://online.wsj.com/article/SB121487042116217787.html>
- Adamy, J. III., 2008. Starbucks to Shut 500 More Stores, Cut Jobs, *The Wall Street Journal Online*, Page B1, Retrieved on July 3, 2008 from <http://online.wsj.com/article/SB121494400432420449.html>
- Carier, J., 2007. Coffee Price Economics, <http://www.ineedcoffee.com/07/coffeeprice/>
- Franchise business. <http://www.franchisebusiness.com>.
- Gates Gill, M., 2007. How Starbucks Saved My Life: A Son of Privilege Learns to Live Like Everyone Else. Penguin Audio.
- Jacobs, F. R. and Chase R. B., 2011. *Operations and Supply Chain Management*, 13<sup>th</sup> Edition, McGraw-Hill Irwin, New York.
- Kirby, J., 2008. Grande Trouble at Starbucks, Macleans.
- Michelli, J. A., 2007. *The Starbucks Experience: 5 Principles for Turning Ordinary into Extraordinary*. New York, NY: McGraw Hill.
- Mission statement of company, <http://philippines.starbucks.com/en-US/About+Starbucks/Mission+Statmenet.htm>
- O’Neill, M., 2008. Trouble Brewing, *New Statesman* (Engl) 137 F 25 2008.
- Russell, R. S. and Taylor B. W., 2011. *Operations Management: Creating Value Along the Supply Chain*, 7<sup>th</sup> Edition, John Wiley & Sons, Inc. New Jersey.
- Schultz, H. and Jones Y. D., 1997. *Pour Your Heart Into It: How Starbucks Built a Company One Cup At A Time*. New York, NY: Hyperion.
- Starbucks Company Timeline, [www.starbucks.com](http://www.starbucks.com)
- Stevenson, W. J., 2009. *Operations Management*, 10<sup>th</sup> Edition, McGraw-Hill Irwin, New York.
- Wikipedia I, the free encyclopedia: [http://en.wikipedia.org/wiki/Howard\\_Schultz](http://en.wikipedia.org/wiki/Howard_Schultz)
- Wikipedia II, the free encyclopedia: <http://en.wikipedia.org/wiki/Starbucks>.
- Wisner, J.D., Leong G. K., and Tan K. C., 2005. *Principles of Supply Chain Management: A Balanced Approach*, Thomson South-Western, Mason, Ohio.

## Biographical notes

**Kiourmas Paryani** received his BS in Electrical Engineering with honors, and obtained both MS and Ph.D. degrees in Electrical Engineering from Michigan State University focusing on Systems Science, Operations Research and Decision Making. He retired from General Motors Corporation as Technical Fellow in 2007 and last served at the GM R & D and Strategic Planning. He gained over 20 years of experience in Industry (in R & D, engineering and product development) and has over 30 years of experience in academia. He is a senior member of the American Society for Quality (ASQ) and a Certified Quality Engineer by the ASQ. He has served as a member of the Board of Examiners (1994 and 1995) for the Michigan Quality Leadership Award. He also serves as a member of Board of Editors for the Journal of Industrial and Systems Engineering (<http://www.jise.info>).

Received January 2011

Accepted June 2011

Final acceptance in revised form June 2011